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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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WILLIAM H BOLLMAN
MANELLI DENISON & SELTER PLLC
2000 M STREET NW
SUITE 700
WASHINGTON, DC 20036-3307

EXAMINER

SING, SIMON P

ART UNIT	PAPER NUMBER
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2645

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/394,096	DAVIS ET AL.	
	Examiner	Art Unit	
	Simon Sing	2645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims recite the limitation of “a message playback signal is combined with a receive signal by a summer *in a receiving path*”, and “allowing continuous hearing of the playback signal by a far end party over the telephone line”. When the playback signal is combined in the receiving path, only the near end party can hear the playback signal. It is not clear how a far end party is able to hear the playback signal when the playback signal is only injected into the receiving path.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15, 17, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li US 5,646,990 in view of Sacca US 5,692,042 and further in view of Chamberlin et al. US 4,817,127.

2.1 Regarding claim 1, Li discloses a full-duplex speakerphone in figures 1 and 2 (column 4, lines 62-67; column 5, lines 1-20; column 6, lines 11-28) with a receiving path from amplifier 268 to speaker 236, comprising:

- a receive signal from a telephone line (column 6, lines 36-40);
- gain modules 268 and 246 (figure 2) in a receive path (telephone line 274 to speaker 236); and
- a summer 260 (figure 2).

Li fails to teach injecting a message playback signal into the speakerphone, and a recording module for recording a telephone conversation from telephone line 274.

However, Sacca discloses a voice messaging system with speakerphone capability in figure 1 (column 7, lines 23-51). Sacca teaches injecting a tape playback message via switch 118 into a receiving path at the input of speaker amplifier 120, and then to a transmitting path at the input of line amplifier 142 for transmitting to a far end party in a speakerphone mode (column 8, lines 7-14, 26-53).

In addition, Chamberlin discloses a modular telephone system in figures 4 and 6. Chamberlin teaches combining a speakerphone 18 (column 13, lines 29-31) with two recording/playback modules 12 and 14, one for recording a telephone conversation and one for playing an outgoing announcement (column 22, lines 38-43). Chamberlin

further teaches independent operations of the speakerphone 18 and each recording/playback module (column 16, lines 19-43), or as a telephone answering device (column 21, lines 27-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Li's reference with the teaching of Sacca and Chamberlin, so that the speakerphone of Li would have been connected to a recording device for recording a telephone conversation, and a tape playback module such as a telephone answering device for pre-recording a message, and summing a pre-recorded message at a summer at the input of speaker amplifier 234 and at another summer at the input of line amplifier 270 of a transmitting path, so that a far end party would have been able to converse with a near end party and to hear the playback message at the same time, such a modification would have enabled a near end user to play a pre-record message to a far end party during a telephone conversation, and also would have enabled the near end party to record a telephone conversation at the same time.

2.2 Regarding claim 2, Li teaches a volume control 226 in response to a acoustic echo canceller (AEC) 222 (figure 2; column 6, lines 62-67).

2.3 Regarding claim 3, the modified Li reference, teaches a line (hybrid) echo canceller 254 and the playback message is injected at the input of speaker amplifier 232 (after line echo canceller 254).

Art Unit: 2645

2.4 Regarding claim 4, it is inherent that a recording/playback module, such as the recording/playback module of Chamberlin, has an amplifier in its signal output path.

2.5 Regarding claim 5, Li teaches a fixed gain amplifier 268 and an automatic gain control (AGC) 246 in a receiving path, and it is a matter of design choice to have two amplifiers, such as a fixed gain and a variable gain, instead of one.

2.6 Regarding claim 6, Li teaches a fixed gain amplifier 268 and an automatic gain control (AGC) 246 (figure 2).

2.7 Regarding claim 7, Li teaches that the volume control 226 is after AGC 246 (figure 2).

2.8 Regarding claim 8, Li teaches a D/A 230 after echo canceller 254 (figure 2).

2.9 Regarding claim 9, Li teaches a Rx speech detector 252 (figure 2; column 6, lines 11-15).

2.10 Regarding claim 10, as discussed in claim 1, the recording module is a telephone answering device (Chamberlin, column 21, lines 27-36).

Art Unit: 2645

2.11 Regarding claim 11, a telephone conversation recorder (recording module) inherently records a receiving signal (audio signal of a far end party) and a transmitting signal (audio signal of a near end party), and the telephone recorder inherently has line-in amplifiers, such an amplifier 268 of Li, to increase the signal level suitable to the recording.

2.12 Regarding claims 12 and 13, Li teaches a fixed amplifier 268 and a AGC amplifier 246 of a receiving path.

2.13 Regarding claims 14, 15 and 22, Li discloses a full-duplex speakerphone in figures 1 and 2 (column 4, lines 62-67; column 5, lines 1-20; column 6, lines 11-28). Li teaches echo canceling a transmit signal from a receive signal at a summer 260 in a receiver path (figure 2; column 7, lines 21-31), but fails to teach recording a telephone conversation from telephone line 274, and injecting a message playback signal into the speakerphone so that a far end user can listen to the playback signal and talk at the same time.

However, Sacca discloses a voice messaging system with speakerphone capability in figure 1 (column 7, lines 23-51). Sacca teaches injecting a tape playback message, from a telephone answering device, via switch 118 into a receiving path at the input of speaker amplifier 120, and then to a transmitting path at the input of line amplifier 142 for transmitting to a far end party in a speakerphone mode (column 8, lines 7-14, 26-53).

In addition, Chamberlin discloses a modular telephone system in figures 4 and 6. Chamberlin teaches combining a speakerphone 18 (column 13, lines 29-31) with two recording/playback modules 12 and 14, one for recording a telephone conversation and one for playing an outgoing announcement (column 22, lines 38-43). Chamberlin further teaches independent operations of the speakerphone 18 and each recording/playback module (column 16, lines 19-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Li's reference with the teaching of Sacca and Chamberlin, so that the speakerphone of Li would have been connected to a recording device for recording a telephone conversation, and a tape playback module such as a telephone answering device for pre-recording a message, and summing a pre-recorded message at a summer at the input of speaker amplifier 234 and at another summer at the input of line amplifier 270 of a transmitting path, so that a far end party would have been able to converse with a near end party and to hear the playback message at the same time, such a modification would have enabled a near end user to play a pre-record message to a far end party during a telephone conversation, and also would have enabled the near end party to record a telephone conversation at the same time.

2.14 Regarding claims 17 and 20, as discussed in claim 14, the recording module is a telephone answering device (Chamberlin, column 21, lines 27-36).

3. Claims 16, 18, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li US 5,646,990 in view of Sacca US 5,692,042.

3.1 Regarding claims 16 and 19, Li teaches a full-duplex speakerphone in figures 1 and 2 (column 4, lines 62-67; column 5, lines 1-20; column 6, lines 11-28), but fails to teach injecting a message playback signal into the speakerphone so that a far end user can listen to the playback signal and to talk at the same time.

However, Sacca discloses a voice messaging system with speakerphone capability in figure 1 (column 7, lines 23-51). Sacca teaches injecting a tape playback message, from a telephone answering device, via switch 118 into a receiving path at the input of speaker amplifier 120, and then to a transmitting path at the input of line amplifier 142 for transmitting to a far end party in a speakerphone mode (column 8, lines 7-14, 26-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Li's reference with the teaching of Sacca, so that the speakerphone of Li would have been connected to a tape playback module for playing back a pre-recorded message which would have been injected into a summer at the input of speaker amplifier 234 and into another summer at the input of line amplifier 270 of a transmitting path, so that a far end party and a near end party would have been able to converse and to hear the pre-recorded message at the same time, such a modification would have enabled a near end user to play a pre-recorded message to the far end party during a telephone conversation.

3.2 Regarding claims 18 and 21, Li teaches a digital speakerphone in figure 2. The digital speakerphone comprises analog to digital converters (A/D) 212 and 262, and digital to analog converters (D/A) 256 and 230. It is inherent that the playback message injected into the digital speakerphone can be either analog or digital, depends on the point of injection. For analog signals, injection (summing) point will be at the input of amplifiers 270 and 234 and as for analog signals, injection (summing) point will be at the input of D/A 256 and 230.

Response to Arguments

4. Applicant's arguments filed on 05/10/2005 have been fully considered but they are not persuasive.

The applicants' argue that Li (US 5,646,990) does not teach speakerphone at all, and it is not inherent that a telephone or telephone line has a receiving path and a transmitting path. Examiner disagrees because first, Li teaches a full-duplex speakerphone in figures 1 and 2. Li clearly states: "The ***full-duplex speakerphone*** is suitable for simultaneous two-way communications in which the local user 140 may speak and listen simultaneously with the remote user 142 (figure 1; column 4, lines 63-66)" and "the preferred embodiment of ***a full-duplex speakerphone***, ... to determine if the system (speakerphone in figure 2) is in a double-talk mode, i.e. simultaneous two-way communication (column 6, lines 11-19)". Secondly, any telephony device, such as telephones (including speakerphone) and telephone lines, must have a receiving path

for receiving voice signals from a far end party, and a transmitting path for transmitting voice (microphone) signals to the far end party. Figure 2 of Li shows a receiving path from telephone line 274 to Speaker 236, and a transmitting path from Microphone 210 to telephone line 274. Therefore, Li teaches a full-duplex speakerphone with a receiving path.


Conclusion

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Simon Sing whose telephone number is 571-272-7545. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang, can be reached at 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.



S. Sing

08/04/2005



FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600